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Marketing Bulletin

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New Eagle 250 Details & Pricing

A new entry-level system with performance, price, and compatibility for the AMOS world

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Announcing the New Eagle 250

Dear Alpha Microsystems VAR:

We are proud to announce the Eagle 250, a new AMOS-based computer system. The Eagle 250 brings the latest Alpha Microsystems technology, built around Motorola's revolutionary *ColdFire*® processor, to the service of your applications and your customers. Highlights of this outstanding new product are as follows:

- **Second of a new generation of AMOS processors** — The Eagle 250 is the next step in our migration from MC 680X0 CPUs to Motorola's newest microprocessor family: ColdFire. These technically innovative chips offer an ideal fit for the AMOS world: high performance, attractive cost, and software compatibility.

- **The latest Alpha Micro technology** — The Eagle 250 also embodies the latest technology from our own engineers. Leading-edge features include all-on-one-board processor design; optional RJ-45 serial ports with built-in lightning protection; a choice of Narrow or Wide SCSI bus; and an advanced controller-on-a-chip that supports high speed 10Base-T Ethernet. Network support includes TAME — short for **T**CP **A**ccess **M**ade **E**asy — that lets you add TCP communications to any AlphaBASIC or AMOS assembly language application.

- **A new level of price/performance** — The Eagle 250 is a low cost system, with performance and connectivity exceeding that of the Eagle 100, 200 and 300 systems. Expandability of the Eagle 250 is also superior, and its price is only slightly higher than an Eagle 100. In fact, the Eagle 250 offers more performance per dollar than any Alpha Micro system we've built before.

- **Easy to configure** — It's a snap to spec out an Eagle 250. Your choice of Wide or Narrow SCSI bus. Memory in *any* mix of one or two SIMMs, from 8MB to 256MB. Use AM-318-10 cards for I/O expansion up to 32 serial ports. A 10Base-T Ethernet port is standard.

- **Easy to buy** — Our Eagle 250 trade-in program makes business sense for current users of virtually any Alpha Micro small or mid-range computer. We offer field upgrades too, with kits for Eagle 100, 200 and 300 systems. We want your business.

- **Free Software – Multi-Alpha Bonus Bundle** — With the purchase of a new Eagle 250 we will include a special software bundle which includes *MULTI, AlphaWrite, AlphaCalc* and *AlphaMail* – absolutely **FREE!**

ColdFire is a registered trademark of Motorola, Inc.

Product Overview

Where the Eagle 250 Fits in the AMOS Product Line

Table 1 shows where the Eagle 250 fits in the AMOS product line. A maximum of 32 serial ports puts the Eagle 250 several steps ahead of the Eagle 100. Performance is impressive. The Eagle 250's ColdFire RISC CPU yields an SI (System Index) rating of 59.9. That's approximately 72% faster than the Eagle 100, 200 or 300, and approaches the speed of an AM-4000M, a much larger and more expensive system.

Other advanced features of the Eagle 250 include:

- Memory from 8MB to 256MB — a wide range of choices.
- Your choice: A Wide SCSI bus for maximum throughput with high-performance peripherals; or Narrow (8-bit) SCSI bus instead.
- The Eagle 250 is a superb upgrade vehicle for existing Eagle 100, 200, 300 or AM-1600 systems. Install an Eagle 250 upgrade kit and get significantly improved CPU horsepower, more memory capacity, serial port expandability, and an optional Wide SCSI bus for top peripheral performance.
- The Eagle 250 can be easily upgraded to an Eagle 450 at minimal cost.

ColdFire Technology

In the Eagle 250, all CPU and I/O logic is implemented on a single board. At the heart is a Motorola ColdFire processor chip. ColdFire is a microprocessor family with strength in three areas vital to AMOS computers. The areas are high performance, attractive cost, and software compatibility.

Motorola conceived ColdFire as a new branch of the MC680X0 family tree. To meet targets for performance, compatibility, and cost, Motorola developed *Variable-Length RISC technology*. VL RISC unites the architectural simplicity of conventional 32-bit fixed-length RISC with a fast-executing, memory-saving, variable-length instruction set.

Our long-term objective is a whole new line of AMOS systems, all drawing on the cost-effective power of ColdFire and all preserving the compatibility to support your applications. The Eagle 250 is another step along that line.

Table 1. AMOS Product Line

Eagle 250 *— Is approximately 72% faster than our Eagle 100, 200 & 300 systems!*

	Popular AMOS-based Systems*					
	Eagle 100	**Eagle 300**	**Eagle 250**	**Eagle 450**	**AM-6000**	**AM-7000**
System					RR 060	RR 075
Performance: SI	**34.9**	**34.9**	**59.9**	**68.5**	**137.0**	**191.8**
CPU	MC68030	MC68030	**ColdFire** RISC	**ColdFire** RISC	MC68060	MC68060-75
Memory: min./max.	8MB/32MB	8MB/32MB	8MB/256MB	8MB/256MB	8MB/256MB ①	32MB/512MB
16-bit, Wide SCSI bus	--	--	Available	Available	Available	Available Ultra
Input/Output						
Serial ports, standard	8	8	8	8	4	4
Serial ports, maximum	16	32	24 ③	32	200+	200+
I/O Expansion Cards	AM-314 / 318	AM-314 / 318	AM-314 / 318	AM-314 / 318	AM-359	AM-359
Parallel Ports	1	2	1	1	4	4
Networking						
Ethernet Controller	Optional; AM-366 card required	Standard; integrated on system board	Standard; integrated on system board	Standard; integrated on system board	Standard; integrated on system board	Standard; integrated on system board
10BaseT (twisted pair) Ethernet Port	Optional	Standard	Standard	Standard 100bT Opt.	Standard ②	10bT & 100bT Standard
UPS Monitoring	Consumes a serial port	Consumes a serial port	Dedicated UPS port	Dedicated UPS port	Dedicated UPS port	Dedicated UPS port
Bisync RJE	Opt. (AM-338)	Opt. (AM-338)		Opt. (AM-338)	--	--
AMOS						
AMOS Versions Supported	2.3A 1.4E	2.3A 1.4E	2.3A	2.3A	2.3A	2.3A

Notes

* Models not shown: Falcon, Eagle 100LC, Eagle 200, 500, 550, Super Eagle, AM-4000, AM-6060 Network Server.

① 512MB memory available on systems with processor board at appropriate revision level.

② 10BaseT Ethernet port furnished as standard on AM-319-20 System Board; optional on AM-176 processor board.

③ If optional RJ-45 ports are used in place of eight standard DB-9 ports, a maximum of (32) RJ-45 ports can be achieved.

Quick Tour of the CPU Board

The Eagle 250's single-board processor is the latest in our long line of powerful, versatile single-board CPUs. Following is a list of the hardware highlights:

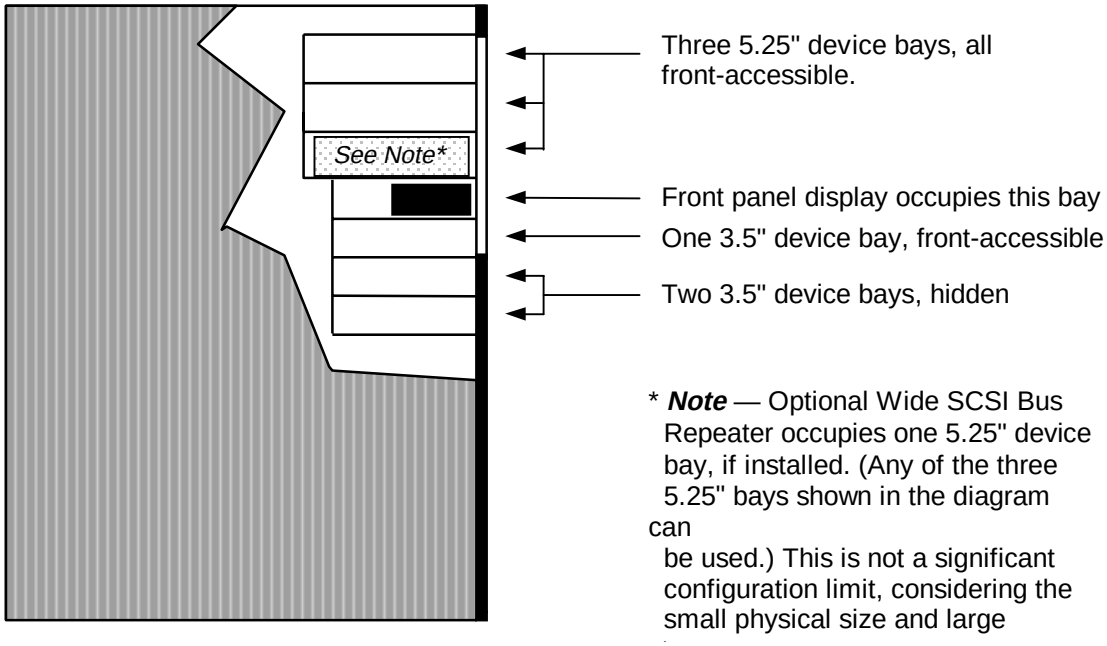
- **Memory** — Two SIMM slots accommodate main memory from 8MB to 256MB. See memory configurator on page 6 for details.
- **Expansion slots** — Three AM-318-10 style, serial I/O expansion slots; connectors on rear panel.
- **Standard serial I/O** — Eight standard DB-9 serial ports; see page 7 for configuration details.
- **SSD chip** — Same chip as used in Roadrunner boards and other Eagle systems.
- **UPS port** — Dedicated DB-9 port for UPS monitoring; see page 9.
- **Parallel port** — DB-25 parallel printer port.
- **CMOS setup** — Flexible, terminal-driven setup facility replaces boot switches.
- **Ethernet port** —10Base-T (twisted-pair) Ethernet port is standard equipment.
- **Ethernet controller** — 16-bit, dual-port, Ethernet controller; much faster than an AM-366.
- **Narrow SCSI bus option** — 50-pin connector for bus on Narrow SCSI Eagle 250.
- **Wide SCSI bus option** — 68-pin connector for bus on Wide SCSI Eagle 250 (a miniaturized design, physically smaller than the 50-pin Narrow SCSI connector).
- **SCSI controller** — 32-bit, bus-master RISC processor.
- **Motorola *ColdFire* processor** — Small but powerful CPU, embodying Motorola's innovative Variable-Length RISC architecture, delivers big-system throughput for the low cost Eagle 250.

Eagle 250 Product Description

Chassis Specifications

The Eagle 250 is furnished in our streamlined, Eagle deskside chassis. Specifications are as follows:

- **Dimensions**—17¾" high x 9" wide x 17" deep (44.5 cm x 22.9 x 43.1)
- **Power requirement**—5 amp @ 115VAC; 2.5 amp @ 230VAC
- **Peripheral mounting**—The chassis accommodates up to six peripheral devices. See Figure 1.


See Note*
Three 5.25" device bays, all front-accessible.
Front panel display occupies this bay
One 3.5" device bay, front-accessible
Two 3.5" device bays, hidden
* Note — Optional Wide SCSI Bus Repeater occupies one 5.25" device bay, if installed. (Any of the three 5.25" bays shown in the diagram can be used.) This is not a significant configuration limit, considering the small physical size and large

Cutaway view from left side

Figure 1. Eagle 250 Chassis: Peripheral Mounting Bays

Memory

The Eagle 250 supports a minimum of 8MB and a maximum of 256MB of main memory. Using a new, flexible, memory architecture, the processor is equipped with two SIMM sockets. *Any combination* of one or two PFB-00712-XX SIMMs can be installed. Upgrades are easy. If an Eagle 250 has one SIMM installed and needs more memory, just add a second SIMM.

Table 2 below shows all allowable SIMM combinations.

Table 2. Eagle 250 Memory Configurator

Install these memory SIMMs... ↓ ↓		**…to obtain this amount of Main Memory**									
		8 MB	**16 MB**	**16 MB**	**24 MB**	**32 MB**	**32 MB**	**40 MB**	**48 MB**	**64 MB**	**64 MB**
PFB-00712-08	8MB Memory, 60ns	1	*2		1			1			
PFB-00712-16	16MB Memory, 60ns			*1	1	2			1		
PFB-00712-32	32MB Memory, 60ns						1	1	1	2	
PFB-00712-64	64MB Memory, 60ns										1
PFB-00712-C8	128MB Memory, 60ns										
		72 MB	**80 MB**	**96 MB**	**128 MB**	**128 MB**	**136 MB**	**144 MB**	**160 MB**	**192 MB**	**256 MB**
PFB-00712-08	8MB Memory, 60ns	1					1				
PFB-00712-16	16MB Memory, 60ns		1					1			
PFB-00712-32	32MB Memory, 60ns			1					1		
PFB-00712-64	64MB Memory, 60ns	1	1	1	2					1	
PFB-00712-C8	128MB Memory, 60ns					1	1	1	1	1	2

*Example — You can make a 16MB system with two 8MB SIMMs ***or*** one 16MB SIMM.

Serial I/O for the Eagle 250

The Eagle 250 comes equipped with eight DB-9 serial ports as standard. The processor board includes three AM-318-10 style expansion slots. However, due to the physical limitations of the Eagle 250 rear panel, only 16 additional RJ-45 style ports can be added, for a total of 24 serial ports. If the system is optionally configured with *all* RJ-45 style ports, then a maximum of 32 serial ports can be installed. All ports mount in 50-pin Centronics-style cutouts in the rear of the chassis. See Figure 2. This versatile arrangement fits the full range of I/O boards in the AM-314 / AM-318 family.

Eight Standard Ports

The eight standard ports are driven directly from the system processor board. A cable leads from the processor board to eight DB-9 ports in the rear panel. See **(A)** in Figure 2. The ports provide full modem control and Super I/O compatibility. If optional AM-90 RJ-45 style ports are installed, then those ports will have built-in lightning protection. RJ-45 pinouts are the same as those on an AM-359 card.

Optional Ports: AM-318-10

The AM-318-10 is a highly-featured, technically-advanced, serial I/O interface. The card provides eight RJ-45 ports, with full modem control, Super I/O compatibility, and built-in lightning protection. See **(B)** in Figure 2. For serial port configuration details, see the above section labeled *Serial I/O for the Eagle 250*.

Optional Ports: Older I/O Cards

For optimum fit with your existing customer sites and your existing parts inventory, we designed the Eagle 250 to use older I/O cards as well as the current AM-318-10. See **(C)** in Figure 2. All of the following are fully compatible:

AM-314 — The AM-314 provides four DB-9 serial ports. In the Eagle 250, each Centronics-style cutout accommodates two DB-9 connectors. Two connectors mount in each DWF-20519-04 Adapter. A set of four adapters comes with the Eagle 250 which are used to mount the standard eight DB-9's; order more if needed. You can add AM-90 boards for RJ-45 connectors and lightning protection without any adapters.

AM-318-00 — The original AM-318 provides eight serial ports, presented to the user at a single RJ-21 50-pin Telco connector. The connector occupies one Centronics cutout.

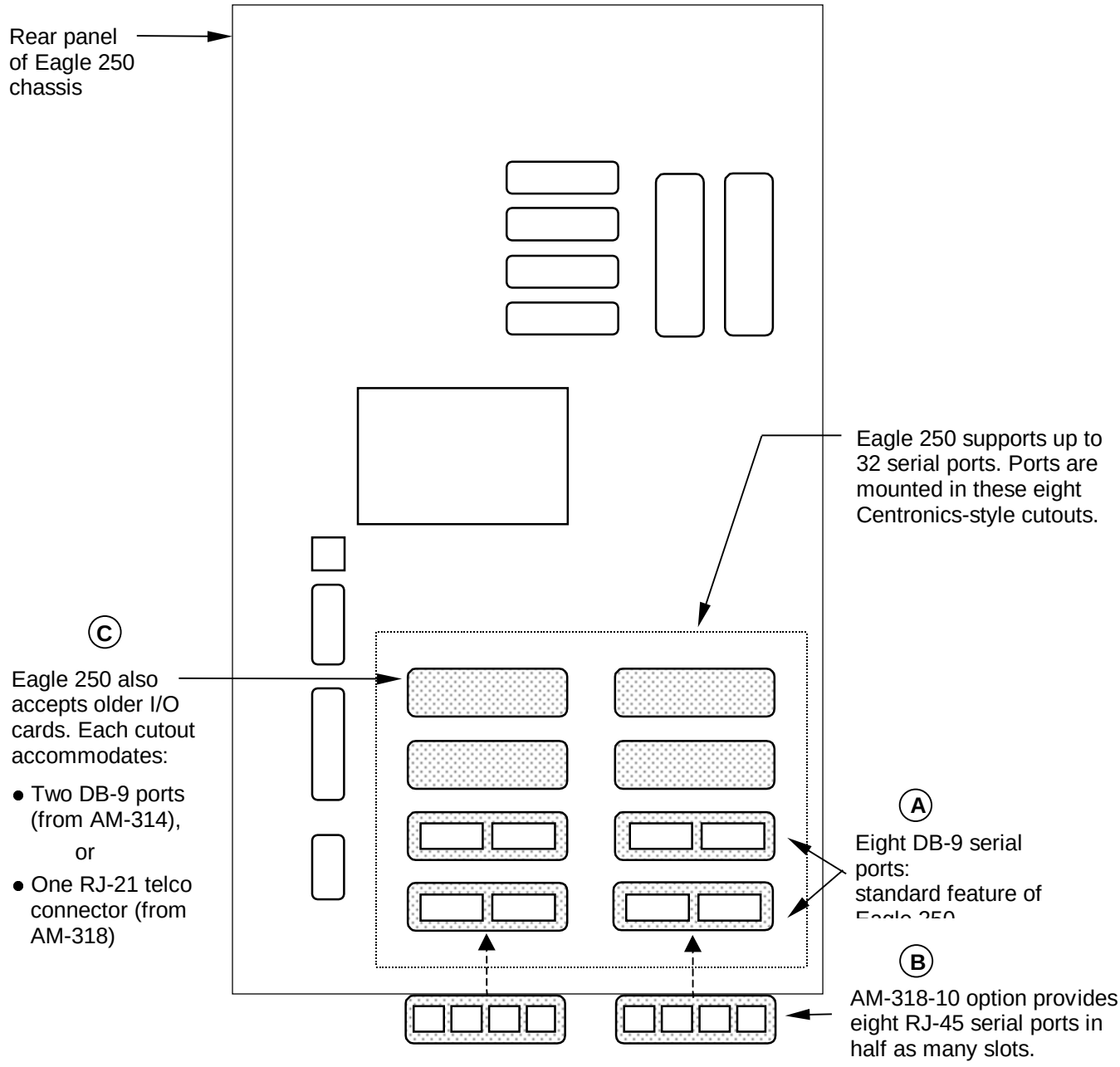

Rear panel of Eagle 250 chassis
Eagle 250 supports up to 32 serial ports. Ports are mounted in these eight Centronics-style cutouts.
C
Eagle 250 also accepts older I/O cards. Each cutout accommodates:
• Two DB-9 ports (from AM-314),
or
• One RJ-21 telco connector (from AM-318)
A
Eight DB-9 serial ports:
standard feature of
B
AM-318-10 option provides eight RJ-45 serial ports in half as many slots.

Figure 2. Eagle 250 Serial Ports

Parallel Port

The Eagle 250 is equipped with one DB-25 parallel port. See Figure 3. The port is functionally identical to the parallel port on an Eagle 100.

Ethernet Port

Ethernet connectivity is a standard feature of the Eagle 250. One port is provided: an RJ-45 jack for connection to a 10Base-T Ethernet.

The Eagle 250 uses an Ethernet controller-on-a-chip (National Semiconductor DP83902) integrated on the processor board. The controller provides efficient, high-throughput operation at 10 megabits per second.

UPS Monitoring Port

The Eagle 250 includes a dedicated DB-9 port for monitoring the switch contacts in an attached uninterruptible power supply. See Figure 3. The switch contacts give basic UPS status information, such as power fail and low battery. A separate connection, from the UPS to a serial port, is required if the user wishes to observe software-monitored functions, such as load, voltage, and fault status.

External SCSI Port

The external SCSI port is the attachment point for a SCSI terminator or for the cable from an external SCSI device. See following pages for configuration information.

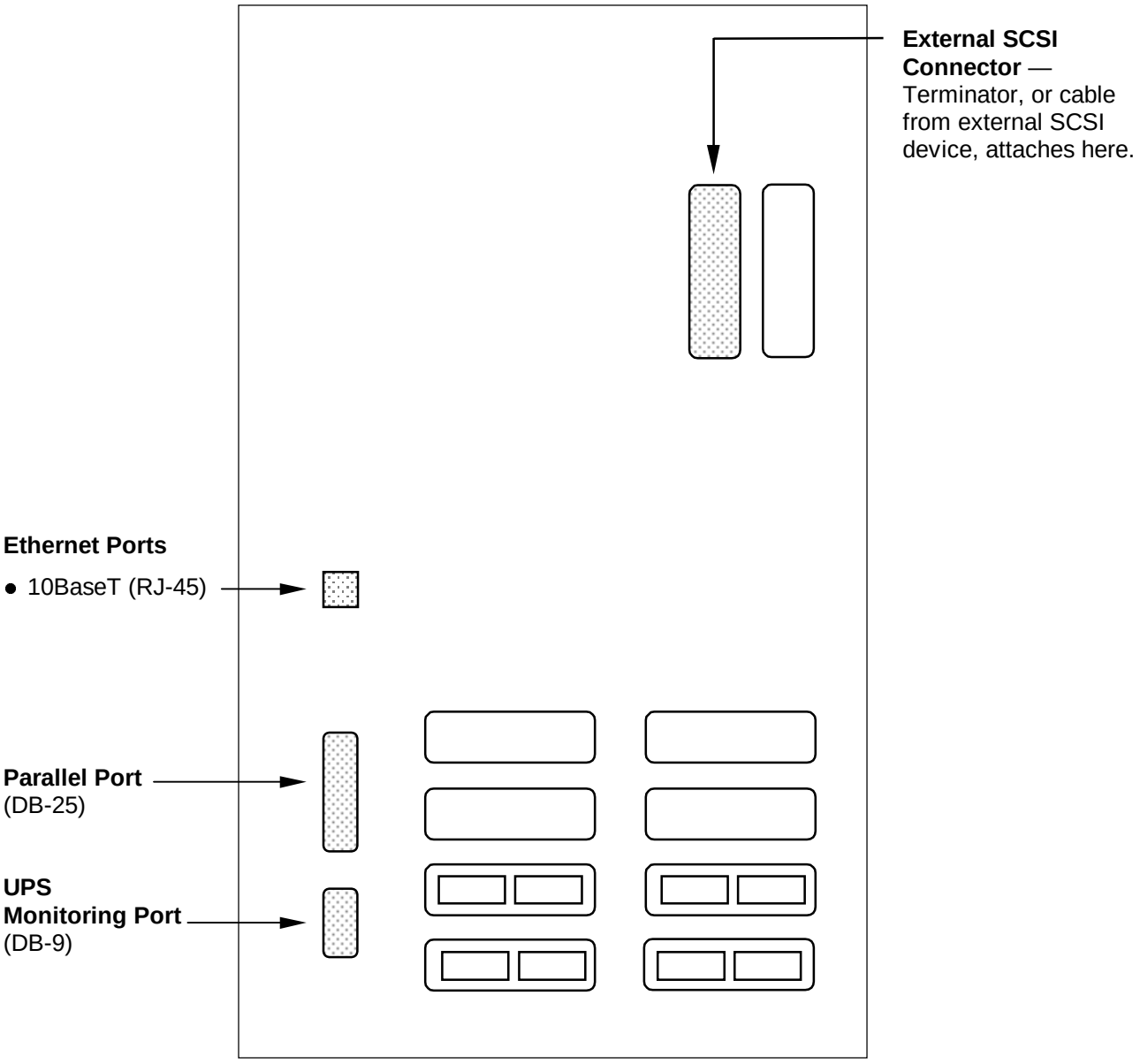


Figure 3. Eagle 250 Ports

SCSI Support

The Eagle 250 incorporates our latest and most powerful SCSI technology, including the option of a Wide SCSI bus for connection to high performance peripherals. This page explains your choice in busses: Wide or Narrow. Configuration guidelines for individual SCSI devices start on page 13.

SCSI Busses: Wide vs. Narrow

The Eagle 250 includes a 32-bit bus-master SCSI controller, integrated on the processor board. As standard, the board provides two interfaces from the controller to SCSI devices. One interface is a 50-pin Narrow SCSI connector. The other is a 68-pin Wide SCSI connector. In an installed Eagle 250, a bus cable runs from one, and only one, of the two connectors to all SCSI devices in the system. Your choices are:

- *A 50-conductor SCSI cable* is furnished when you order a Narrow SCSI Eagle 250 System, part number SBC-EG250-01. This is the same type of SCSI cable used in earlier Eagle systems and in Roadrunner 030 and 040 systems. The bus is one byte wide (8 bits plus parity) and supports a maximum transfer rate of 10 megabytes per second.
- *A 68-conductor Wide SCSI cable* is furnished when you order a Wide SCSI Eagle 250 System, part number SBC-EG250-02. The Wide SCSI bus is two bytes wide and supports a maximum transfer rate of 20MB per second. Disk-intensive applications are potentially faster with the Wide SCSI bus and a Wide SCSI disk drive. Wide SCSI also has the advantage in multi-disk configurations. Spreading a file and its index across two Wide SCSI disks, for example, boosts the performance advantage of each disk.

The two bus cables are mutually exclusive. Mixes, with some devices on one bus and some on the other, are not supported. Table 3 summarizes the characteristics of the two busses.

If You Order an Eagle 250 with Narrow SCSI (SBC-EG250-01):

An Eagle 250 in the Narrow SCSI configuration supports our familiar SCSI-2 disk drives (part number PDB-00436-XX), tape streamers, DATs, and other Narrow SCSI peripherals.

The system will also accept Wide SCSI devices. Examples include Fast-Wide SCSI-2 disks, such as our current series of PDB-00440-XX disk drives. Each such device requires a PDB-00440-90 Adapter to mate with the 50-pin SCSI cable. In this environment, Fast-Wide devices will perform at about the same speed as Narrow SCSI-2 devices.

If You Order an Eagle 250 with Wide SCSI System (SBC-EG250-02):

For maximum system throughput, order the Eagle 250 in the Wide SCSI configuration. Data moves in and out of the disk buffers faster because the interface to the system is 16 bits wide, instead of the 8-bit path used in SCSI-2 drives. The Wide SCSI bus cable provides 68-pin connectors that mate directly with the 68-pin connectors on Fast-Wide SCSI-2 devices.

The Wide SCSI bus also accommodates Ultra SCSI disk drives. With present Eagle 250 hardware and software, Ultra SCSI drives provide the same performance as Fast-Wide SCSI-2 disk drives.

When you order a Wide SCSI Eagle 250, you'll also need to order a PDB-00440-91 Adapter for each Narrow SCSI-2 device, such as a 525MB or other prior model tape streamer. The adapter is a 50-to-68-pin width-changer that lets Narrow devices connect to the Wide bus.

SCSI Devices for the Eagle 250

A wide choice of disks, tapes, and other SCSI devices helps tailor the Eagle 250 to specific site requirements. Table 4 summarizes current offerings. The system supports up to five SCSI devices mounted inside the system chassis (internal devices). Additional SCSI devices can be installed outside the chassis (external devices).

General Configuration Guidelines

Each SCSI device requires mounting space and a connection to the SCSI bus. Table 4 shows the type of connection that each device requires: Narrow SCSI or Wide SCSI. Mounting requirements are shown for internal devices. See the Eagle 250 chassis diagram in Figure 1 for bay locations inside the chassis.

Configuring a Wide SCSI System

The electrical characteristics of the Wide SCSI bus, and the high bit-transmission rates it permits, impose added configuration rules. The following should be noted:

1. With a standard Wide SCSI Eagle 250, the maximum length of external cabling, starting from the external SCSI connector on the chassis, is three feet (91 cm). In practice that usually means a maximum of one external device.

2. Adding the optional AM-441-00 Wide SCSI Bus Repeater increases the maximum external cable length to eight feet (243 cm). That amount of cabling will normally allow up to three external devices.

3. If the external devices include a mix of Wide SCSI and Narrow SCSI, the external Narrow devices must be grouped at the outboard end of the cabling, farthest from the chassis.

4. An external cable is standard with some devices and optional with others. We offer the cables listed in Table 5. If you plan to supply your own cables, make sure they're fabricated to SCSI-2 construction standards.

Table 3. Choice of SCSI Busses in the Eagle 250

	Narrow SCSI Bus	Wide SCSI Bus
Availability		
Availability in the Eagle 250	Standard in SBC-EG250-01 Eagle 250, Narrow SCSI	***Standard*** in SBC-EG250-02 Eagle 250, Wide SCSI ***Optional upgrade*** for system originally with Narrow SCSI
Technology		
Bus width	One byte (8 bits + parity)	Two bytes (16 bits + parity)
Maximum transfer rate	10 Mbytes/sec	20 Mbytes/sec
Connection to SCSI Devices		
Maximum number of SCSI devices you can connect to the bus	7 total, including internal and external devices	***Internal***: 5 devices, maximum ***External***: Depends on cable length; up to 8 feet allowed with AM-441 SCSI Repeater.
Connectors on bus for attaching devices	50-pin	68-pin
How peripherals connect to the bus:		
Devices with *50-pin* SCSI Connector ● SCSI-2 disks ("Narrow disks") ● Streamer tapes, 2GB or less ● DAT tapes ● Other standard SCSI-2 devices	← These devices connect directly to the SCSI bus, same as in Roadrunner 030 and 040 systems, Eagle 100, and earlier Eagle systems.	Each 50-pin device requires a PDB-00440-91 Adapter to connect to the Wide SCSI bus.
Devices with *68-pin* Wide SCSI Conn. ● Fast-Wide SCSI-2 or UltraSCSI disks	← Each device requires a PDB-00440-90 Adapter to connect to the SCSI bus.	Since these devices have a 68-pin data connector, they connect directly to the 68-pin Wide SCSI bus.
External SCSI Connector	50-pin connector, same as in Roadrunner and other Eagles. Installation kit includes 50-pin SCSI terminator.	68-pin Wide SCSI external connector. Installation kit includes 68-pin Wide SCSI Active Terminator.
Recommendations		
What happens when Wide and Narrow SCSI disk drives are installed in the same system?	Wide SCSI disks will be no faster than Narrow disks.	Not recommended: Wide SCSI performance advantage will be sacrificed.
Your Decision — The Eagle 250 is available with either bus style. We recommend the following for maximum performance: ● Order the Wide SCSI configuration: SBC-EG250-02. ● Order Wide SCSI disk drives (part number PDB-00440-XX). ● Order a PDB-00440-91 Adapter for each Narrow SCSI device in the system.		

Table 4. SCSI Devices for the Eagle 250*

Part Number	Description	Interface†			Mounting Bay	Remarks
	Internal Devices					
PDB-00436-XX	SCSI-2 Disk Drives	N		50-pin	3.5"	See current AMOS price list for compatible models
PDB-00440-XX	Fast-Wide SCSI-2 Disk Drives		W	68-pin	3.5"	See current AMOS price list for compatible models
PDB-0062X-00	¼" Tape Streamers	N		50-pin	5.25"	See current AMOS price list for compatible models
PDB-00649-XX	DAT Tape Drives	N		50-pin	5.25"	See current AMOS price list for compatible models
PDB-00212-20	3.5" Diskette Drive, SCSI	N		50-pin	3.5"	Attaches to SCSI bus; no floppy controller required
PDB-00401-51	CD-ROM, Internal, SCSI	N		50-pin	5.25"	
PDB-00402-51	CD-Recorder, Internal, SCSI	N		50-pin	5.25"	
PDB-00441-00	Wide SCSI Bus Repeater		W	68-pin	5.25"	Does not count as a 'SCSI Device'
	External Devices					
PDB-00446-XX	AM-446 RAID Subsystem		W	68-pin		
PDB-00401-50	CD-ROM, External, SCSI	N		50-pin		
PDB-00642-00	SCSI-to-Pertec Converter, Ext.	N		50-pin		
- - - -	Portable CD-ROM players					
PDB-03501-00	AM-3501 Expansion Subsystem	N	W	Either		Not a SCSI device itself; provides mounting for up to four half-height, Wide or Narrow SCSI devices. Connects to Wide or Narrow AMOS host system.

For *any* external device on a Wide SCSI system: do not use a cable longer than 3 ft unless the system is equipped with a Wide SCSI Bus Repeater.

* As of July 2000. New devices, higher capacities, and more cost-effective configurations are constantly being added. See Marketing Bulletins, or call your Order Administrator, for the latest information.

† N = Narrow SCSI bus; W = Wide SCSI bus.

Table 5. External SCSI Cables

		Use This Cable to Connect Chassis to Device	
External SCSI Connector on Eagle 250 Chassis	**Connector on External SCSI Device**	**Cable Part Number**	**Description**
68-pin	50-pin	PDB-00440-80	Cable, 50-pin Centronics to 68-pin Ext. SCSI, 3 ft.
68-pin	50-pin	PDB-00440-81	Cable, 50-pin Centronics to 68-pin Ext. SCSI, 6 ft.*
68-pin	68-pin	PDB-00440-82	Cable, Wide SCSI, 68-pin/Male, 68-pin Male, 6 ft.*
68-pin	68-pin	PDB-00440-83	Cable, Wide SCSI, 68-pin/Male, 68-pin Male, 3 ft.

* To use a 6 ft. cable and stay within Wide SCSI cable guidelines, an Eagle 250 must be equipped with the AM-441-00 Wide SCSI Bus Repeater.

SCSI Diskette Drive

The Eagle 250 supports our SCSI-interface diskette drive, the AM-212-20, as an optional feature. The drive has a Narrow SCSI (50-pin) interface that connects directly to the SCSI bus. No separate controller is required.

Note: Diskette Drive Requires 5.25" Mounting Bay

Although the AM-212-20 diskette drive is a 3.5" device, the complete assembly, including the mounting adapter for the drive, requires a 5.25" mounting bay in the system chassis.

The AM-212-20 reads and writes 3.5" diskettes in all of the following formats:

- AMOS 720MB 3.5" double density format
- AMOS 1.44MB 3.5" high density format
- PC 720MB 3.5" double density format
- PC 1.44MB 3.5" high density format

The Eagle 250 does not support 5.25" diskettes. The Eagle 250 does not require — or support — the AM-219 Floppy Controller.

Software

AMOS 2.3A Operating System

The Eagle 250 runs under AMOS 2.3A and later versions of the AMOS operating system. If your application is running under an earlier release and you'd like help in moving to 2.3A, please call the Technical Assistance Center. We're here to help you add still greater value to your application in the Alpha Micro world.

TAME—TCP Management From Inside Your Application

The network software included with AMOS 2.3A includes AlphaTCP 1.5A, the latest version of our AMOS-compatible implementation of the TCP/IP protocol family. AlphaTCP in turn includes TAME, for **T**CP **A**ccess **M**ade **E**asy. TAME lets you add TCP communication to any AlphaBASIC or AMOS assembly language application. To access TCP from an assembly language program use a series of monitor calls. From AlphaBASIC or AlphaBASIC PLUS use the TCP XCALL subroutine.

AlphaTCP 1.5A software and documentation are available on the AlphaCD (June, 2000 and later versions). Documentation is also available at our Web site. For details of TAME, see latest revisions of the *AMOS Monitor Calls Manual* and the *AlphaBASIC XCALL Subroutine User's Manual*.

Free Software – Multi-Alpha Bonus Bundle

With the purchase of a new Eagle 250 we will include a special software bundle which includes *MULTI*, *AlphaWrite*, *AlphaCalc* and *AlphaMail* – **at no additional cost**!

See the attached *Reseller Supplement* for details of this special offer.

Upgrades & System Trade-ins

Users of older Alpha Micro Eagle computers can enjoy most benefits of the Eagle 250, at reduced prices, by means of either the Eagle 250 Upgrade Program, or the Eagle 250 Trade-in Program. The upgrade program offers field-installable upgrade kits for Eagle 100, 200 and 300 systems, while the trade-in program allows you to trade-in virtually any AMOS system towards the purchase of a new Eagle 250 system. (See the attached *Reseller Supplement* for program details and pricing).

Important Note: The Eagle 250 requires 60ns memory SIMMs to function correctly. Older 70ns SIMMs cannot be used!

Upgrade Kits for Eagle 100, 200 & 300 Systems

These upgrades convert an Eagle 100, 200 or 300 system to either of two systems: an Eagle 250 with Wide SCSI, or an Eagle 250 with Narrow SCSI. Each kit consists of a processor board, internal cabling and hardware, and a replacement rear panel for the user's existing deskside Eagle chassis. The processor board contains the entire processor and I/O logic of an Eagle 250. The cabling provides a Narrow or Wide SCSI bus, depending on the kit selected. The replacement rear panel provides mounting arrangements for the Eagle 250's port connectors.

Benefits of Upgrading

As with any upgrade, benefits depend on site circumstances. Factors include the user's operating system, application, number of users, and peripherals installed. The benefits shown in Table 6 should be considered typical.

Table 6. Potential Benefits of an Eagle 250 Upgrade

	Upgraded System		
Potential Benefits	**Eagle 100**	**Eagle 200**	**Eagle 300**
Higher performance: approximately 72% higher SI rating	✔	✔	✔
Higher performance: Wide SCSI bus support	✔	✔	✔
Twice as many serial ports	✔	✔	
Optional lightning protection on serial ports	✔	✔	✔
More maximum memory capacity: up to 256MB	✔	✔	✔
Built-in Ethernet	✔	✔	
Substantially higher Ethernet throughput	✔	✔	✔
Greater memory configuration flexibility	✔	✔	✔

System Performance

Performance of the Eagle 250, like that of any computer, is application dependent. The best way to determine actual throughput is to run an application and measure the results. If such a test isn't practical, benchmarks can provide a relative measurement.

The benchmarks in this bulletin are offered for general comparison analysis and example only. For definitive measurements, VARs and end users should verify actual performance based upon their specific applications and environments. The benchmarks we use give an overall indication of system throughput. It's important to note that the way your application software uses the system may produce results different from those suggested by our benchmarks.

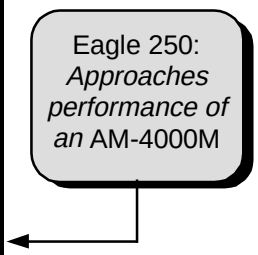
System Index (SI)

The SI benchmark measures processor and memory performance in the AMOS environment. The measure is relative to the original WDC-based Alpha Micro computer, the AM-100, which was arbitrarily assigned an SI of 1. See the table below; bigger numbers are better.

Keep in mind that the SI reflects processor speed only, not overall system performance as users will experience it. Factors such as disk accessing and the effect of multiple users are not measured in this rating.

Table 7. System Index (SI) Benchmark Results for Various Alpha Micro Systems

System Model	CPU	*SI* Compute Index
AM-100	WDC Chips	1
AM-1400	68010	6.1
AM-1600	68020	22.6
Falcon/AM-PC	68340	16.1
Eagle 100	68030	34.9
Eagle 300	68030	34.9
AM-3000 VME	68030	43.6
Eagle 250	**ColdFire**	**59.9**
AM-4000M	68040	66.1
Eagle 450	ColdFire	68.5
Eagle 500	68040	79.9
Super Eagle	68040	79.9
AM-6000/6060	68060-66	137.0
AM-7000	68060-75	191.8



The Bottom Line

The Eagle 250 is an all-around standout: in technology, in features, in price/performance, and in compatibility with today's AMOS sites, systems and applications.

Information about the Eagle 250 will also be available on our all-AMOS Web site, *www.amos-online.com.*

We at Alpha Microsystems are continuing our commitment to our dealers, customers and the AMOS community, to provide leading-edge technology with legacy application compatibility at affordable prices. Welcome to the Eagle 250!

The Eagle 250 is shipping now!

Best regards,

Jack Chardi
Product Marketing Manager

Notes

Reseller Supplement

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